

NSF Proposal Preparation Guidelines

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1. Introduction

This document is intended to help people in organizing the effort and in preparing the necessary documents associated with submission of a grant proposal to the National Science Foundation (NSF) through the FastLane system. It also includes key Fermilab contacts for various process steps and pointers to information about the process. A sample of a complete proposal document is included in a separate pdf file.

Although there are many details and requirements from NSF on information to be submitted, it is important to think of the overall package as an a reasonably concise explanation, written in a way to convince a combined set of business and technical people (without your level of technical expertise on the subject), that the return (in US capability, new invention, state of the art, and/or contribution to the scientific community) is worth spending the budget for the proposed work.

2. Overview of the Proposal Components¹

PI/Co-PI Information Sheets – Generated by FastLane after the Principle Investigator (PI) info is input and PI's are named

Cover Sheet – Generated by FastLane after required data is input

Table of Contents – Entered into a form in FastLane

Summary – A brief (1 page or less) summary of the proposed activity, including the intellectual merit and broader impact. This is also an input to FastLane.

Proposal Document (Titled “Proposal Description” in FastLane) – Around 5 pages (for a small proposal) up to 15 pages (not including references) that generally contains²:

1. project description, including objectives and scientific, engineering, or educational significance of the proposed work; relationship to prior NSF funding
2. suitability of the methods to be employed
3. qualifications of the investigator and the grantee organization
4. effect of the activity on the infrastructure of science, engineering and education
5. amount of funding required, program of work, and management plan

¹ For all the gory details, consult:

http://www.nsf.gov/publications/pub_summ.jsp?ods_key=gpg

² Many proposals are in response to a NSF Request for Proposal which may detail the information required to be in the submission.

6. facilities, equipment, and other resources
7. references (these page(s) are entered as a separate document into FastLane)

Biographical Sketches – For each PI/Co PI and Senior Staff (Max 2 pages each)

Budget Sheets – An Excel form submitted into FastLane for each entity receiving funds

Budget Justification – Text describing use of budgeted amounts on the budget sheets (following each entity's budget sheets)

Current and Pending Support – For each PI and other Senior Staff, list the total project funding (including that for all participating institutions) and yearly calendar months of effort (of the named PI or Senior Staff) from existing grants and/or pending funding and time from this and other grants

Letters of Collaboration/Support

3. Proposal Process

There are a set of steps for preparing and submitting a proposal, some of which will require several weeks of calendar time. The largest amount of work is typically writing the proposal document itself, but the official budget should be started in parallel in order to get it approved and officially submitted to the submitting organization prior to the final submission date.

The proposal components that are written in final form are the Proposal Summary, Proposal Document, Biographical Sketches, and Budget Justifications. The Letters of Collaboration/Support are written by the collaborating/supporting organizations. All other sheets are produced by FastLane after the containing information is input to the system.

The steps to complete a proposal to NSF, including the rough time that it should start prior to the submission date are:

1. Identify the team that will develop the proposal. This should always include the PIs and someone for each organization that will contribute effort funded by the proposal. The Principal PI is the nominal team leader and should lay out the pieces to be done and assign responsibilities for drafts. Each PI/Co PI needs to be entered into FastLane. At Fermilab, Jeff Appel is the FastLane Authorized Organizational Representative who is can enter new names into the system. Begin at least 1 month before proposal submission.
2. The proposal itself normally begins as an outline with key points to be made for each section listed. This outline can be enhanced and eventually fleshed out by the appropriate experts. Begin this as part of step 1 and continue over ~2-4 weeks.
3. The plan of work in the proposal should be discussed early and each entity with budget effort should contact their financial experts to develop the budget information for each of the proposal years with the proper accounting for inflation

and organizational loading. For Fermilab Computing Division (CD), Mike Smith is the financial contact and Mary Jo Lyke will review and approve the package before signoff by Jeff Appel (or Cindy Conger or Pier Oddone). Begin as early as possible – at least 3 weeks before submission. (Understand that the budget must be signed by the heads of the organizations involved and the Fermilab budget office and that requires signatures in an approval chain.) Finance will need the following:

- a. Name and title of the PI, Co-PIs, and senior personnel
 - b. Names of any specific Fermilab persons whose salary will be partially or wholly charged to the project
 - c. The time (months), for each year of the project, that each Fermilab person will work on the project, including those months charged to the project and those that are funded by other (name them) projects. This information will be used to generate the “Current and Pending Support” pages.
 - d. Certification that the dollar amount of funding for each year has been agreed to if not being derived from c.
 - e. A list of any travel and living or other expenses to be allocated for Fermilab personnel
 - f. A paragraph summary of the project role of each of the Fermilab people
 - g. Before final signoff, they will need the proposal document
4. Any of the PI’s can enter/update information in FastLane as it is completed.
 5. Once all the budget sheets have formal approval, they can be sent to the Principal PI for submission to FastLane.
 6. The Authorized Organizational Representative (and only that person, currently Jeff Appel for FRA/Fermilab) does the actual submission after all required information is in FastLane and on or before the submission deadline from NSF.

4. Sample Proposal

The appendix contains a sample proposal, submitted by the Information Sciences Institute and involving Fermilab budget and a Fermilab Co-PI. This was submitted in response to a RFP from NSF, so the proposal itself is structured around six sections specified in the RFP.

The appendix is contained in a separate file, Example-Complete-NSF-Proposal.pdf.